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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,650	04/02/2004	Shinji Moriyama	251290US0	8195
22850	7590	03/29/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			DOTE, JANIS L	
			ART UNIT	PAPER NUMBER
			1756	
DATE MAILED: 03/29/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/815,650	Applicant(s) MORIYAMA ET AL.	
	Examiner Janis L. Dote	Art Unit 1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The examiner acknowledges the amendment to claim 10 set forth in the amendment filed on Oct. 27, 2005. Claims 1-10 are pending.

The "Amendment to the specification" section in the amendment filed on Jan. 10, 2006, has been entered.

2. The "Amendment to the specification" section in the amendment filed on Oct. 27, 2005, did not comply with 37 CFR 1.121 for the reasons discussed in the Notice of Non-compliant amendment mailed on Jan. 5, 2006. Accordingly, that "Amendment to the specification" section has not been entered.

3. The objection to the specification set forth in the office action mailed on Jun. 28, 2005, paragraph 3, has been withdrawn in response to the amended paragraph beginning at page 11, line 23, of the specification, set forth in the amendment filed on Jan. 10, 2006.

The rejection of claim 10 under 35 U.S.C. 112, second paragraph, set forth in the office action mailed on Jun. 28, 2005, paragraph 5, has been withdrawn in response to the amendment to claim 10 set forth in the amendment filed on Oct. 27, 2005.

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4. The disclosure is objected to because of the following informalities:

The use of trademarks, e.g., Dianal [sic: DIANAL] at page 17, line 21, has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. These examples are not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

Applicants' arguments filed on Oct. 27, 2005, have been fully considered but they are not persuasive. Applicants assert that the amendment filed on Jan. 10, 2006, overcomes the objection. However, for the reasons discussed above, said amendment did not capitalize of all of the trademarks disclosed in the instant specification. Accordingly, the objection stands.

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5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-3, 5, 9, and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese Patent 61-203463 (JP'463), as evidenced by Grant & Hackh's Chemical Dictionary, page 14, Diamond, Handbook of Imaging Materials, pp. 160-163, and applicants' admission at page 3, lines 10-16, page 11, line 23, to page 12, line 1, and in Table 1 at page 22, of the instant specification (applicants' admission I). See the USPTO English-language translation of JP'463 for cites.

JP'463 discloses a toner comprising 100 parts by weight of a polyester binder resin, an offset prevention agent, and 6 parts by weight of the activated carbon associated with the tradename Shirawashi A-1 obtained from Takeda Pharmaceutical Industries K.K. The activated carbon has an average particle diameter of 4.5 μm . Translation, Working example 1, toner (1) at page 8, and Table 3 at page 12, toner (1). JP'463 further discloses a two-component developer comprising toner (1) and a magnetic carrier. Translation, page 10, lines 11-13. The 4.5 μm average particle size is within the numerical value of "5.6 μm or less" recited in instant claim 1. The amount of the

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activated carbon is within the amount range recited in instant claim 3.

JP'463 further discloses a toner image forming process that comprises the step of developing an electrostatic image with its toner. Translation, page 2, lines 8-10. JP'463 discloses that its two-component developer is used in a commercially available copier manufactured by Minolta Camera Co., Ltd., that comprises a selenium photosensitive member. Translation, page 11, lines 2-7. It is well known in the electrophotographic arts that commercially available copiers form electrostatic latent images on the photosensitive member that are developed with a developer, where the developer can be a two-component developer comprising a toner and a carrier or a single component developer comprising a toner. See Diamond, Handbook of Imaging Materials, Fig. 4.1(c) on page 161, and section 4.1.3 at pp. 162-163. Thus, the JP'463 image forming process develops an electrostatic latent image with its two-component development as recited in instant claim 10.

JP'463 does not identify the activated carbon as a charcoal as recited in the instant claims. However, it is well known in the chemical arts that activated carbon is "charcoal produced by the destructive distillation of vegetable matter, e.g., nutshells" See Grant & Hackh's Chemical Dictionary,

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page 14. Thus, it is reasonable to conclude that the JP'463 activated carbon is a charcoal as recited in the instant claims.

JP'463 does not identify the 4.5 μm average particle size of the activated carbon associated with the tradename "Shirawashi A-1" as a volume-based median particle size as recited in instant claim 1. Nor does JP'463 disclose that the activated carbon has a "coefficient of variation of 80% or less" as recited in instant claim 1. However, as discussed above, the JP'463 4.5 μm average particle size is within the numerical value of "5.6 μm or less" recited in instant claim 1. JP'463 shows that toner (1) exhibited stable chargeability for 10 hours. Translation, Table 1 at page 10. Toner (1) provided images with "excellent" fine line reproducibility, and with no occurrence of fogging after 50,000 copies. Translation, Table 2 at page 11, and the accompanying text at page 12, lines 1-2; and Table 3 at page 12. These are the properties sought by applicants. The instant specification discloses that when the volume-based median particle size of the charcoal powder is larger than 5.6 μm , "it is difficult to contain the charcoal powder in the toner. When the coefficient of variation exceeds 80%, the state of dispersion of the charcoal powder in the toner is inhomogeneous. Therefore, when these requirements are not satisfied, not only the degree of . . . blackness and the

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covering strength [are] considerably lowered but also the chargeability is adversely affected, thereby resulting in the lowering of the image quality." Instant specification, page 3, lines 10-16. The instant specification shows that a toner comprising a charcoal powder having a volume-based median particle size greater than 5.6 μm and a coefficient of variation of greater than 80% provides images with "poor" thin-line reproducibility and background fogging; while toners comprising the charcoal powder that possesses the particle size and coefficient of variation within the scope of instant claim 1 provided images with "good" thin-line reproducibility and low occurrence of background fogging. Instant specification, Table 1 at page 22, examples 1-4 and comparative example 1. Thus, because the JP'493 toner (1) exhibits the properties sought by applicants, it is reasonable to presume that the JP'493 activated carbon has a volume-based median particle size and a coefficient of variation as recited in instant claim 1. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

JP'463 also does not disclose that toner (1) has a dielectric loss tangent of 0.01 or less as recited in instant claim 5. The instant specification discloses that the "dielectric loss tangent of the toner is preferably from

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0.001 to 0.1 . . . from the viewpoint of the printed image quality, especially the background fogging, which is affected by the dispersibility of the charcoal powder in the toner."

Instant specification, page 11, line 23, to page 12, line 1.

As discussed supra, the JP'463 toner (1) provided images with no occurrence of fogging after 50,000 copies, which is the property sought by applicants. Translation, Table 3 at page 12.

Accordingly, it is reasonable to presume that the JP'463 toner has a dielectric loss tangent of 0.01 or less as recited in instant claim 5. The burden is on applicants to prove otherwise. Fitzgerald, supra.

7. Claim 4 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP'463, as evidenced by Grant & Hackh's Chemical Dictionary, page 14, and applicants' admission I. See the USPTO English-language translation of JP'463 for cites.

JP'463, as evidenced by Grant & Hackh's Chemical Dictionary, page 14, and applicants' admission I, discloses a toner as described in paragraph 6 above, which is incorporated herein by reference. According to JP'463, because activated carbon has a high surface electric resistance and low cohesibility, it has good dispersion properties. Translation,

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page 3, lines 23-25. When the dispersion characteristics are improved, uniform charging is obtained and toner scattering is reduced. The "gradation reproducibility of the image texture is improved, and unevenness in the half-tone areas is eliminated."

Translation, page 3, line 25, to page 4, line 3.

JP'463 does not identify from what source the activated carbon associated with tradename "Shirawashi A-1" is obtained. However, JP'463 discloses that the activated carbon used in the invention "may be any type of activated carbon such as coconut shells, wood carbon, etc." Translation, page 4, line 4-5. Because JP'463 explicitly names only two sources of activated carbon, it is reasonable to presume that the activated carbon associated with tradename "Shirawashi A-1" is obtained from either coconut shells or wood carbon. The burden is on applicants to prove otherwise.

Alternatively, it would have been obvious for a person having ordinary skill in the art to use an activated carbon obtained from coconut shells or wood carbon in the toner disclosed by JP'463 because that person would have had a reasonably expectation of successfully using activated carbon, based on the known properties of activated carbon disclosed by JP'463.

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8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP'463, as evidenced by Grant & Hackh's Chemical Dictionary, page 14, and applicants' admission I, combined with US 6,383,705 B2 (Aoki). See the USPTO English-language translation of JP'463 for cites.

JP'463, as evidenced by Grant & Hackh's Chemical Dictionary, page 14, and applicants' admission I, discloses a toner as described in paragraph 6 above, which is incorporated herein by reference.

JP'463 does not exemplify a toner comprising the polyester resin recited in instant claim 6. However, JP'463 teaches that the toner binder resin may be "any material already used as a binder resin for toners . . . [which] include[s] . . . polyester resins." Translation, page 4, line 25, to page 5, line 1.

Aoki discloses a toner binder resin comprising crystalline polyester resin **A** having a softening point of 127.3°C and amorphous polyester resin **d** having a softening point of 100°C. Tables 1 and 2 at cols. 7-10 and Table 3 at col. 10, example 1. Polyester resin **A** and polyester resin **d** meet, respectively, the high softening point and low softening point polyesters recited in instant claim 6. According to Aoki, a toner comprising said binder resin has excellent low temperature fixing ability,

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offset resistance, blocking resistance, and pulverizability.

Col. 1, lines 55-58, and Table 4 at col. 12, example 1.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Aoki, to use the toner binder resin in example 1 of Aoki as the binder resin in toner (1) of JP'463, because that person would have had a reasonable expectation of successfully obtaining a toner that has excellent low temperature fixing ability, offset resistance, blocking resistance, and pulverizability, as disclosed by Aoki.

9. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'463, as evidenced by Grant & Hackh's Chemical Dictionary, page 14, and applicants' admission I, combined with US 5,079,123 (Nanya). See the USPTO English-language translation of JP'463 for cites.

JP'463, as evidenced by Grant & Hackh's Chemical Dictionary, page 14, and applicants' admission I, discloses a toner as described in paragraph 6 above, which is incorporated herein by reference.

JP'463 does not exemplify a toner comprising a low-melting point wax as recited in instant claims 7 and 8. However, JP'463 does not limit the type of offset prevention agent used in its toner. Translation, page 6, line 25, to page 7, line 2.

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According to Nanya, a polyolefin wax, such as a low-molecule weight polypropylene, "can impart to the toner high resistance to the off-set phenomenon, but cannot sufficiently improve the fixing ability [of the toner] at low temperatures." Col. 1, lines 55-60. Nanya further discloses that toners comprising a conventional carnauba wax as a release agent have both high resistance to the off-set phenomenon and excellent fixing ability at low temperatures. Nanya, col. 1, lines 61-63. However, said toners do not have high resistance to the winding phenomenon and cause toner filming. Nanya, col. 1, lines 64-65, and col. 2, line 7. Nanya discloses that carnauba wax, which comprises generally from 3 to 4 wt% of free aliphatic acids, cannot be thoroughly dispersed in the toner binder resin. Therefore, the wax tends to separate from the toner during the development process. Nanya, col. 2, lines 3-7, and 38-39. Nanya discloses that a carnauba wax "substantially free of aliphatic acids" overcomes the above problems. See carnauba wax B in example 2 of Nanya, which comprises 0.7 wt% of free aliphatic acids and has a melting point of 84°C, which is within the range of 50 to 120°C recited in instant claim 7. Nanya further discloses that the content of the aliphatic acids in the carnauba wax is preferably less than 1 wt%. Nanya, col. 2, lines 14-34, and 44-45. Nanya discloses that due to the removal

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of the aliphatic acids, the size of the wax crystal decreases to 1 μ m or less, when dispersed in the binder resin, which is said to be much smaller than that of conventional carnauba wax.

Nanya discloses that for this reason a toner comprising the carnauba wax substantially free of aliphatic acids is free from the previously-mentioned filming problems, and exhibits high resistance to both off-set and winding phenomena. Col. 2, lines 46-57.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Nanya, to use carnauba wax B taught by Nanya as the offset prevention agent in toner (1) of JP'463, because that person would have had a reasonable expectation of successfully obtaining a toner that exhibits improved resistance to off-set, winding phenomena, and filming.

10. Applicant's arguments filed on Oct. 27, 2005, with respect to the rejections over JP'463 in paragraphs 6-9 above have been fully considered but they are not persuasive.

Applicants assert that the Rule 132 declaration, which was executed by Shinji Moriyama on Oct. 25, 2005, filed on Oct. 27, 2005, shows that the actual product used in JP'463 (Machida) is "Shirasagi A-1," not "Shirawashi A-1" as disclosed in the

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translation. The declarant states that "it is presumed that the Shirasagi A-1 was pulverized so as to be adjusted to have the desired particle size used. The coefficient of variation (CV) value can be freely adjusted by conditions of pulverization so that the CV value of the charcoal powder used in the examples of Machida cannot be assumed." Applicants further assert that "Machida is insufficiently disclosed with regard to CV and one skilled in the art practicing Machida would be without a clue regarding any significance of CV." Applicants also assert that the showing in the declaration demonstrates that a CV above 80% results in poor background fogging and thin-line reproducibility.

Applicants' assertions are not persuasive. Applicants' assertion of the inability to determine the CV value of the charcoal powder used in JP'463 is not persuasive. Any competitor using a similar toner would, if the instant claims were patented, need to determine whether their toner comprising a charcoal powder has a CV of 80% or less in order to avoid infringement. In the same way, it is the applicants' burden to distinguish their claimed toner from prior art toners that are sufficiently similar that a reasonable presumption arises that they are the same. Applicants are in the best position to come forward with objective evidence to rebut the presumption that

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the JP'463 toner (1) comprises a charcoal powder having a CV as recited in the instant claims. Compare In re Spada, 15 USPQ2d 1655, 1659 (Fed. Cir. 1990).

Furthermore, the showing in the declaration does not appear to be a probative comparison to JP'463. Comparative example 1 in the declaration exemplifies a toner comprising a charcoal powder having a particle size of 5.59 μm and a CV of 88.2% and a particular binder resin. According to the declaration, the toner in comparative example 1 produced images with "poor" background fogging and "poor" thin-line reproducibility. However, as discussed in the rejection in paragraph 6 above, the JP'463 toner (1) in example 1 of JP'463 comprises an activated carbon powder having an average particle diameter of 4.5 μm . As discussed in the rejection in paragraph 6 above, the JP'463 toner (1) provided images with no occurrence of fogging after 50,000 copies and with "excellent" fine line reproducibility. Thus, even if the evaluations used in JP'463 were not identical to those used in the instant specification, the preponderance of evidence shows that the toner in comparative example 1 does not provide the images provided by the JP'463 toner (1). As noted by applicants in their response filed on Oct. 27, 2005, JP'463 teaches that the particle size of its activated carbon should be approximately 5 μm or less. Translation, page 4, lines 5-7.

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JP'463 also shows that toners comprising an activated carbon powder having an average particle size of 7.5 μm or 10 μm provided images with slight occurrence of fogging after 40,000 copies and occurrence of fogging after 10,000 copies, respectively. Translation, Table 3 at page 12. JP'463 states that "it can be seen that . . . in toners . . . which used particles greater than 5 μm , fogging and filming occurred. Accordingly, the average particle diameter of the activated carbon in the present invention should be no more than 5 μm ." Translation, page 13, lines 3-6. Thus, it appears that JP'463 teaches away from the toner exemplified in comparative example 1 in the declaration. Accordingly, comparative example 1 in the declaration does not appear to be a probative example to JP'463.

Applicants further assert that "it is not proper for the Examiner to equate qualitative expressions of results, such as 'good' and 'poor' thin-line reproducibility between the specification herein, and the prior art, to find that means to obtain the results are quantitatively the same, such as a CV of 80% or less." Applicants assert that there is no indication that the respective standards of measurement for the present invention and JP'463 are the same. Applicants further assert that it is not proper to use applicants' comparative data, which is not prior art, against them.

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However, the examiner is merely using the available evidence of record to determine whether or not it is reasonable to transfer the burden to applicants to distinguish over prior art toners. Such prior art toners are deemed to be the ones that meet all of the expressed structural and compositional limitations in the claims, and that disclose properties that are consistent with the properties taught by applicants as advantages due to a CV of 80% or less. Patents are not properly issued for the discovery of a previously unknown or unrecognized property of an old material.

Furthermore, for the reasons set out in the rejection in paragraph 6 above, a prima facie case has been established that the JP'426 toner (1) comprises an activated carbon powder that meets the CV limitation recited in instant claim 1. Since the PTO cannot conduct tests, the burden is on applicants to come forward with objective evidence to distinguish the claimed subject matter with the reference material. Moreover, as noted by applicants, the toner in comparative example 1 in the declaration, which comprises a charcoal powder having a particle diameter of 5.59 μm and a CV of 88.2%, provided images with "poor" background fogging and "poor" thin-line reproducibility." However, as discussed supra, the JP'463 toner (1) provided images with no occurrence of fogging after 50,000 copies and

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with "excellent" fine line reproducibility. Thus, even if the evaluations used in JP'463 were not identical to those used in the instant specification, the preponderance of evidence shows that the toner in comparative example 1 does not provide the images provided by the JP'463 toner. Thus, for the reasons discussed above and in the rejection in paragraph 6 above, it is reasonable to presume that the JP'463 toner (1) comprises an activated carbon having a volume-based median particle size and a coefficient of variation (CV) as recited in instant claim 1. Applicants have not met their burden to show otherwise.

Accordingly, the rejections over JP'463 in paragraphs 6-9 stand.

11. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Mr. Nam Nguyen, can be reached on (571) 272-1342. The central fax phone number is (571) 273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD
Mar. 20, 2006


JANIS L. DOTE
PRIMARY EXAMINER
GROUP 1500
1700